

IMPORTANT BIRD AND BIODIVERSITY AREAS IN INDIA

Priority sites for Conservation

Revised and updated 2nd Edition Vol. II



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**Second Edition: Revised and Updated
Volume II**

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MIZORAM



Nearly 75% of the total geographical area of Mizoram is under forest cover

Mizoram (21° 57' - 24° 30' N. and 92° 15' - 93° 26' E.) located in the extreme southern part of northeastern India, has a geographical area of 21,087 sq km (0.6% of India's geographical area). Mizoram is bounded on the north by Assam and Manipur, on the east and south by Myanmar and on the west by Bangladesh and Tripura. The terrain is hilly and mostly undulating with the average altitude ranging from 500 to 800 m and the maximum reaching 2,157 m in the Blue Mountains. The Kolodyna (Chhimtuipei), Tlawng (Dhaleswari) and Tuivai (Tipai) are the major rivers in the State. A small stretch of the Barak River also passes through Mizoram.

Mizoram literally translated means 'the land of highlanders'. The Britishers used to call it the Lushai Hills District. In 1954, the name was changed to Mizo Hills District. In 1972, when it was declared a Union Territory, it was named Mizoram. It became the 23rd State of the Indian Union on February 20, 1987.

The Mizos belong to the Mongoloid race. They seem to have settled at first in the Shan State of Burma (Myanmar). The tribes left Burma and moved westwards into India. They occupied the Lushai Hills. During the British rule, the Mizos

raided British territories, but the British defeated them and usurped their land. In 1898, the entire Mizo territory was formed into the Lushai Hills District and made a part of Assam and became a district of Assam. The historic Mizoram Peace Accord was signed on June 30, 1986 between the Government of India and the Mizo National Front, ending the two-decade old insurgency.

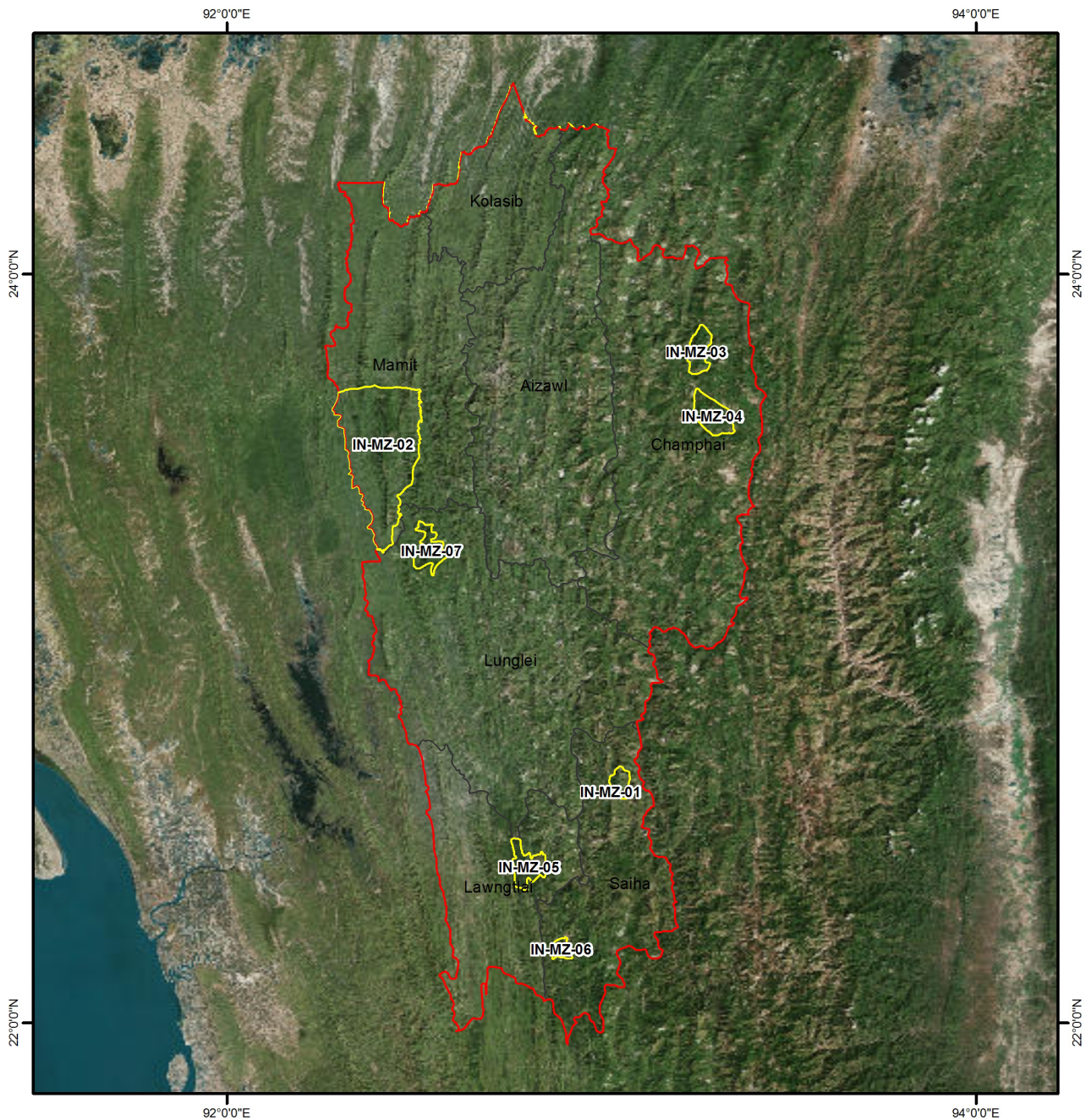
Missionaries helped the tribals achieve a high literacy rate 91.58% 2011 and now they speak Mizo and English. The Chakmas are Buddhists and speak Chakma language. Other tribes are Pawis (Lai), Lakhers (Mara), Hmars and Reangs.



Mizoram's climate ranges from moist tropical to moist subtropical. The average annual rainfall ranges from 2,160 mm in Aizawl to 3,500 mm in Lunglei. During winter, the temperature varies from 22 °C to 24 °C and in summer from 18 °C to 29 °C. The Tropic of Cancer passes through the middle of the State.


According to 2011 census, the total human population of the State is 1,091,014, of which 54% is rural. The tribal population constitutes about 94.7% of the total population. The average population density of this sparsely populated

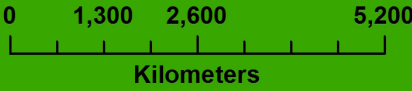
Important Bird Areas in Mizoram


IN-MZ











Jhuming or slash and burn is a very prevalent method of encroaching and cultivating forest land in Mizoram. This one was seen on the outskirts of Troy Wildlife Sanctuary

state is 52 persons per sq. km.

There are four major wetlands in Mizoram that attracts waterbirds: Palak, Mampui, Rengdil and Tamdil. No wetland is identified as IBA based on A4 criteria. Only Palak has been identified as IBA as it has very good forests around it which have many biome species.

Vegetation

As per the Forest Survey of India report of 2011, Mizoram ranks third amongst the states both in terms of forest cover and percentage of the State's geographical area. The recorded forest area of the State is 1,594,000 ha, constituting 75.6% of the total geographical area of the State and 2.1% of the Indian forest Area (Ministry of Environment and Forest 2011). As per the Forest Survey of India report of 2001, the reserved forest constitutes 712,700 ha (44.7%), protected forest 356,800 ha (22.4%) and unclassified forest

5,240,00 ha (32.9%). In the same FSI report of 2001, it is stated that dense forest is 893,600 ha (42.4%), open forest is 855,800 ha (40.6%) and non-forested area is 17.0% (Ministry of Environment and Forest 2001). Mizoram has three major forest types, Tropical Wet Evergreen, Tropical Moist Deciduous and Subtropical Pine Forests (Ministry of Environment and Forest 2011).

IBAs AND PROTECTED AREAS

Mizoram is rich in wild flora and fauna, both in variety and abundance. About 88,400 ha of the forest area, constituting 3% of the geographical area of the State is under two national parks and four wildlife sanctuaries (Rodgers *et al.* 2000). Dampa is a Tiger Reserve. In 2004, six IBAs were identified (Islam and Rahmani 2004). We have added one more IBA, Thorangtlang WLS. Not much work on birds has been done in Mizoram due to socio-political reasons

IBAs of Mizoram		
IBA site code	IBA Site names	IBA criteria
IN-MZ-01	Blue Mountain (Phawngpui) National Park	A1, A2
IN-MZ-02	Dampa Tiger Reserve	A2
IN-MZ-03	Lengteng Wildlife Sanctuary	A1, A2
IN-MZ-04	Murlen National Park	A1, A2
IN-MZ-05	Ngengpui Wildlife Sanctuary	A3
IN-MZ-06	Palak Lake	A3
IN-MZ-07	Thorangtlang Wildlife Sanctuary	A2

LIST OF THREATENED BIRDS WITH IBA SITE CODES		
ENDANGERED		
Yellow-breasted Bunting	<i>Emberiza aureola</i>	IN-MZ-03
VULNERABLE		
Blyth's Tragopan	<i>Tragopan blythii</i>	IN-MZ-01
Dark-rumped Swift	<i>Apus acuticauda</i>	IN-MZ-01, 03
Rufous-necked Hornbill	<i>Aceros nipalensis</i>	IN-MZ-07 (?)
Great Slaty Woodpecker	<i>Mulleripicus pulverulentis</i>	IN-MZ-05
NEAR THREATENED		
Oriental Darter	<i>Anhinga melanogaster</i>	IN-MZ-03
Himalayan Griffon	<i>Gyps himalayanensis</i>	IN-MZ-03
Cinereous Vulture	<i>Aegypius monachus</i>	IN-MZ-01
Mrs. Hume's Pheasant	<i>Symaticus humiae</i>	IN-MZ-01, 03, 04
White-cheeked Hill-partridge	<i>Arborophila atrogularis</i>	IN-MZ-01, 02, 04, 05,
Great Pied Hornbil	<i>Buceros bicornis</i>	IN-MZ-02, 03, 04, 05, 07
ENDEMIC BIRD AREA 130: EASTERN HIMALAYAS		
Blyth's Tragopan	<i>Tragopan blythii</i>	IN-MZ-01
Dark-rumped Swift	<i>Apus acuticauda</i>	IN-MZ-01, 03
Striped Laughingthrush	<i>Garrulax virgatus</i>	IN-MZ-01
Brown-capped Laughingthrush	<i>Garrulax austeni</i>	IN-MZ-01
Grey Sibia	<i>Heterophasia pulchella</i>	IN-MZ-01, 04
White-naped	<i>Yuhina Yuhina bakeri</i>	IN-MZ-01, 04
Black-browed Leaf Warbler	<i>Phylloscopus cantator</i>	IN-MZ-02

and difficult terrain, so there are chances that there are many more areas that qualify BirdLife International IBA criteria.

AVIFAUNA

Mizoram is very rich in bird life. Pradhan (2002) has listed 210 species, mainly based on his studies of the Murlen National Park and Dampa Tiger Reserve between 1991 and 1995. While the Centre for Environment Protection (undated) claims that so far 275 species of birds from 39 families have been recorded. Choudhury (2008) has listed 479 species in his book. He has listed another 140 species, “yet not spotted in Mizoram but likely to occur in view of records from adjacent areas.”

Among the Critically Endangered species, both Slender-billed Vulture *Gyps tenuirostris* and White-rumped Vulture *G. bengalensis* are probably extinct in the State. Both were rare and localized in the northern areas in Mizoram even when they were abundant in the plains of Assam (Choudhury 2008). Three specimens of the White-bellied Heron *Ardea insignis* from Sangau in Saiha district are present in the zoology museum of University of Michigan, USA. There is no recent record of this bird from the State. Another rare species that has probably vanished already is White-winged Duck *Asarcornis scutulata*. Past records from nearby Assam areas (Choudhury 2000) and Chittagong Hill Tracts in Bangladesh (Hussain and Haque 1982) indicated that the bird was present in State, but there is now no confirm record, although Choudhury (2008) has mentioned many unconfirmed records in his book.

Among hornbills, Wreathed Hornbill *Aceros undulatus*, Rufous-necked Hornbill *A. nipalensis*, Great Pied Hornbill

Buceros bicornis, Brown Hornbill *Anorrhinus tickelli*, and Oriental Pied Hornbill *Anthracoceros albirostris* have been reported from Mizoram. All hornbills are under threat of poaching, and some larger ones may be locally extinct. Choudhury (2008) has a reported Great Slaty Woodpecker *Mulleripicus pulverulentus* as resident and uncommon. We do not have record from any IBA but that has more to do with incomplete information from most of the IBAs.

All pheasant species are under tremendous pressures of hunting and trapping. One of the victims was Green Peafowl *Pavo muticus* that is probably already extinct in the State. As Choudhury (2008) has shown, Mizoram was well within its original distribution range. It occurrence was mentioned by Ali and Ripley (1987), Grimmett *et al.* (2011) and Rasmussen and Anderton (2012), mainly based on anecdotal records. It is probably extinct in Mizoram.

Another species that is likely to occur, albeit in small numbers, is Pale-capped Pigeon *Columba punicea*, a globally Vulnerable species. BirdLife International (2001) has mentioned museum specimen records from the Cachar district of Assam which adjoins Manipur. Similarly, Inglis (1896-1902) has recorded it from Hailakandi district of Assam, located across the border towards north Manipur.

Jatinga in Assam is famous for the large number of birds that are killed when they are attracted towards artificial lights (Gee 1964; Choudhury 1996, 2000). In Lunglei district of Mizoram similar phenomenon occur - many birds die in the night after hitting walls of buildings. Rao and Zoramthanga (1978) found that this occurs in September and October during the period when the area receives late rains and the sky is over-cast, with fog and mist. Annually, between 300 and 500 birds are killed just in one house. Interestingly,

most of the species are resident such as Moorhen *Gallinula chloropus*, Grey-fronted Green Pigeon *Treron pompador*, Emerald Dove *Chalcophaps indica*, Indian Three-toed Kingfisher *Ceyx erithacus*, Ruddy Kingfisher *Halcyon coromanda*, Hooded Pitta *Pitta sordida*, Drongo-Cuckoo *Surniculus lugubris* and Cuckoo *Cuculus canorus*.

THREATENED BIRDS FOR WHICH MIZORAM IS VERY IMPORTANT

Mizoram has good habitats for many threatened species such as the Blyth's Tragopan *Tragopan blythii*, Mrs. Hume's Pheasant *Symaticus humiae*, and Dark-rumped or Khasi Hills Swift *Apus acuticauda*.

Blyth's Tragopan *Tragopan blythii* Vulnerable

This species qualifies as Vulnerable because its total population is believed to be small and declining, and is scattered in small subpopulations within a severely fragmented range. Widespread high levels of hunting and continuing habitat destruction will inevitably exacerbate this situation (BirdLife International 2001). In Mizoram, it has been reported from the Blue Mountain National Park (Phwangpui National Park), (Kaul *et al.* 1996, Katju 1996, Ghose and Thanga 1998). Choudhury (2008) recorded up to five calling males within a 3 sq. km. area at Farpak, on April 12, 2000. According to him, there is only about 20 sq.

km. of potential habitat for the species in the park, above 1,800 m elevation.

Mrs. Humes Pheasant *Symaticus humiae* Near Threatened

This species appears to have been reduced to a small population, which has become increasingly fragmented. Although its status remains virtually unknown across a substantial proportion of its historic range in Myanmar, habitat loss and hunting continue to be as major threats throughout. It therefore qualifies as Vulnerable (BirdLife International 2001). In Mizoram, this bird has been reported from the Lengteng Wildlife Sanctuary, Murlen National Park, (Robertson 1995, Katju 1996, Kaul *et al.* 1996) and Blue Mountain National Park (Ghose 2000). Choudhury (2008) has shown that it quite widely but thinly distributed in Champai and Saiha districts.

Dark-rumped or Khasi Hills Swift *Apus acuticauda* Vulnerable

This poorly known swift qualifies as Vulnerable owing to its very small population. The discovery of new breeding colonies and identification of possible threats would necessitate a reassessment of its threatened status (BirdLife International 2001). In a surveys (funded by IBCN) in Mizoram and Meghalaya, a breeding population was found in the Blue Mountain National Park (Ahmed 2003).



RAJU KASAMBE

The Vulnerable Binturong *Arctictis binturong* is one of the elusive nocturnal mammals found in Mizoram



RAJU KASAMBE

A Mizo boy showing a trapped Blue-winged Laughingthrush *Trochalopteron squamatum*

Choudhury (2008) has reported it from Lengteng WLS on February 20, 2001.

Restricted Range species

Mizoram falls in the Endemic Bird Area of Eastern Himalayas (EBA 130), which has Subtropical Hill Forest, Temperate Forest, and Subalpine Forest, where many of the restricted range species of this EBA are found such as the Blyth's Tragopan, Dark-rumped Swift, Grey Sibia *Heterophasia pulchella*, and White-naped Yuhina *Yuhina bakeri*. The main threats to the habitats of these birds are moderate habitat loss (e.g., due to logging, agriculture, overgrazing) and hunting (Stattersfield *et al.* 1998).

Biomes

They are Biome-7 (Sino-Himalayan Temperate Forest), with key habitats of Broadleaf Evergreen Forest, Broadleaf Deciduous, Mixed Broadleaf-Coniferous and Coniferous Forest and Montane Grassland, Biome-8 (Sino-Himalayan Subtropical Forest) which has Lower Montane Rain Forest, Hill Evergreen Forest and Pine Forest as key habitats, and Biome-9 (Indo-Chinese Tropical Moist Forest) which has Lowland Evergreen Rain Forest, Semi-Evergreen Rain

Forest and Moist Deciduous Forest. A total of 225 species are present in these three biomes, according to the BirdLife International (undated). Based on the checklist prepared by Choudhury (2008), till now 50 species of Biome-8, 25 species of Biome-7 and nine species of Biome-11 have been reported from Mizoram. The list could go up if detailed surveys are done in all seasons in the state.

THREATS AND CONSERVATION ISSUES

Mizoram also have similar problems as the other northeastern states, such as poaching of birds and other biodiversity, tree felling, fuelwood collection, and unsustainable shifting (*jhum*) cultivations. For example, the Blue Mountain National Park is surrounded by human habitation. Secondly, its location on the international border aggravates the poaching problem as poachers from Myanmar frequently raid this area, although poaching has reduced since the area was declared a national park. All around the Park, *jhum* cultivation is practiced. Villagers set fire to the vegetation, and the fires sometimes spread to the Park. Firewood collection is another age-old practice still continuing in the Park, although it is now reduced. During the IBCN-funded surveys on the Khasi Hills (or Dark-

rumped) Swift, it was reported that the cliffs located inside the Park are possible breeding sites of this Swift. It is also necessary to study the ecology and habitat requirements of this Vulnerable species, as the Blue Mountain National Park could be the second most important site in India, following Cherrapunji in Meghalaya, for this globally threatened species.

In the Dampa and Lengteng wildlife sanctuaries, all the villages surrounding these sites practice slash and burn shifting cultivation (Raman 1995), and there are always chances of the fire spreading to the sanctuaries during the burning season.

The Murlen National Park, which contains some of the higher known hills of Mizoram, constitutes an important region that has apparently not been given adequate attention by the Government. In terms of conservation of the Mrs. Hume's Pheasant and possibly the Blyth's Tragopan, this site is of high conservation value and needs better protection (Kaul *et al.* 1996).

The Palak Lake also has jhum cultivation in its surrounding areas. The inter-village trail that surrounds it makes it vulnerable to disturbance. Apart from habitat degradation by *jhumming*, cane extraction, and occasional tree felling, hunting for larger vertebrates and birds are constant threats to this IBA.

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BLUE MOUNTAIN (PHAWNGPUI) NATIONAL PARK

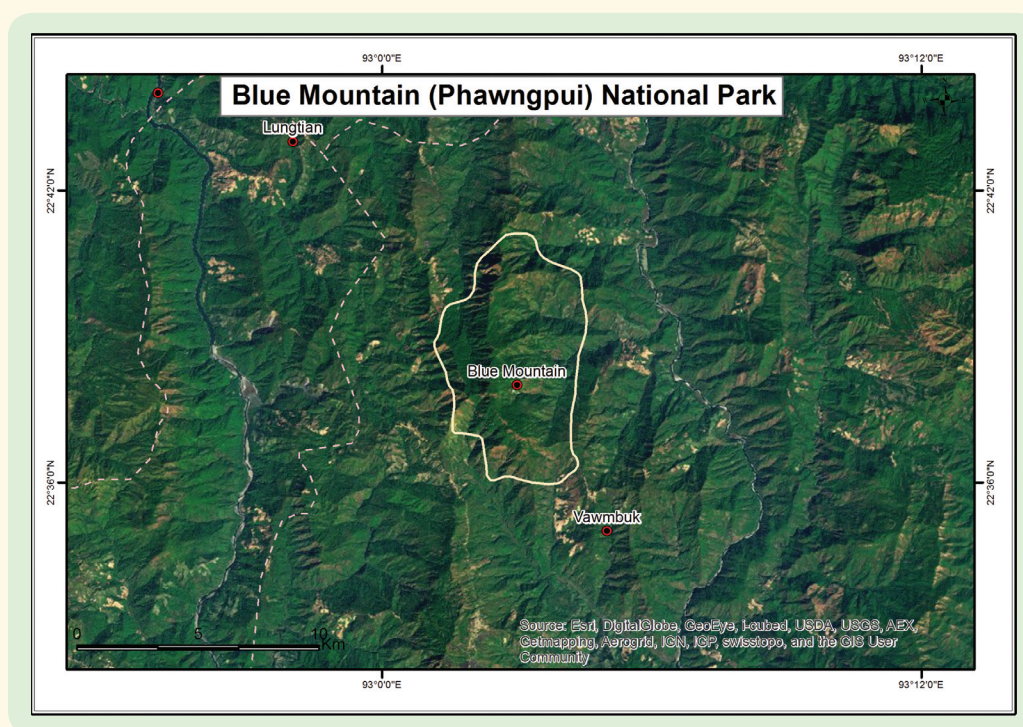
IBA Site Code	: IN-MZ-01
Administrative Regio (State)	: Mizoram
District	: Saiha
Coordinates	: 22° 38' 60" N, 93° 01' 60" E
Ownership	: State
Area	: 5,000 ha

Altitude	: 1,360 - 2,157 m
Rainfall	: >2,000 mm
Temperature	: 2 °C to 35 °C
Biogeographic Zone	: North-East
Habitats	: Tropical Wet Evergreen Forest, Sub Tropical Broadleaf Hill Forest

IN-MZ-01

IBA CRITERIA: A1 (Threatened species), A2 (Endemic Bird Area 130: Eastern Himalayas)

PROTECTION STATUS: National Park, established in July 1997.



GENERAL DESCRIPTION

The Blue Mountain (Phawngpui) National Park is located in southeastern Mizoram. The Koladyne river flows along the eastern side of the Park and also forms the international border with Myanmar. Eastward, beyond Koladyne River lie the Chin Hills of Myanmar. The highest point in Mizoram, Phawngpui Peak (2,157 m), is located within this Park. Most of the Park is covered with Sub-tropical Broadleaf and Tropical Evergreen forests. There are some cliffs and patches of natural grasslands on the tableland near Farpak. The Park is surrounded by villages on all sides and is an isolated refuge for wildlife.

AVIFAUNA

Though the Blue Mountain Park is a small protected area, it supports very rich bird life. Kaul *et al.* (2001) have

reported more than 125 species of birds from this site, and more are likely to occur.

A survey on status of Mrs. Hume's Pheasant *Syrmaticus humiae* carried out by Choudhury (2002) reveals that this species is still widely distributed in the higher hills of eastern Mizoram. There is no report from the lower western hilly tracts. Phawngpui National Park is the known westernmost locality for this species. It is considered Near Threatened by BirdLife International (2014). Its status remain virtually unknown across a substantial portion of its historic range in Myanmar, while habitat loss and hunting continue to be major threats all over its range. However, a survey by Choudhury (2006) showed that this species appears to be widely distributed in the higher hills of eastern Mizoram. This IBA site is extremely important for the survival of Mrs Hume's Pheasant in India. It also

has good populations of Blyth's Tragopan *Tragopan blythii* (Kaul *et al.* 2001), another Vulnerable species according to BirdLife International (2014).

Perhaps the most important sighting in this Park is that of the globally threatened Dark-rumped Swift *Apus acuticauda*, also called Khasi Hill Swift. Ahmed *et al.* (2001) saw five birds in August 2001. Choudhury (2006) recorded three birds. Four individuals were sighted by Kazmierczak (quoted in BirdLife International 2001, p. 1784) in March 1998. Earlier, during March to May 1953, six specimens were collected in the Lushai hills (BirdLife International 2001). The Khasi Hills Swift or Dark-rumped Swift is one of nine threatened members of the suite of 21 bird species that are entirely restricted to the "Eastern Himalayas Endemic Bird Area" (Stattersfield *et al.* 1998).

This site falls in the Eastern Himalayas Endemic Bird Area (Stattersfield *et al.* 1998) in which 21 restricted range species have been identified by BirdLife International (undated). Besides the Vulnerable Blyth's Tragopan, which is also endemic to this EBA, four more restricted range species have been identified from this site (Kaul *et al.* 2001): Striped Laughingthrush *Garrulax virgatus*, Brown-capped Laughingthrush *G. austeni*, Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*. No information is available on their abundance and population estimates.

The altitude of Blue Mountain NP varies from 1,300 m to >2,000 m, covering two biomes: Sino-Himalayan Subtropical Forest (Biome-8) and Indo-Chinese Tropical Moist Forest (Biome-9). Kaul *et al.* (2001) listed 19 species of Biome-8, and 12 of Biome-9. They also found White-cheeked Hill-partridge *Arborophila atrogularis* and Purple Cochoa *Cochoa purpurea* of other biomes.

During an IBCN bird survey, Kasambe *et al.* (2013) sighted Striated Bulbul *Pycnonotus striatus*, Flavescent Bulbul *Pycnonotus flavescens*, Rusty-fronted Barwing *Actinodura egeroni*, Blue-winged Minla *Siva cyanouroptera*, White-spectacled Warbler *Seicercus affinis*, Black-throated Sunbird *Aethopyga saturata*, Streaked Spiderhunter *Arachnothera magna*, Maroon Oriole *Oriolus traillii*, Grey Treepie *Dendrocitta formosae*, Little Bunting *Emberiza pusilla*, Fire-breasted Flowerpecker *Dicaeum ignipectus*. Blue-winged Minla *Siva cyanouroptera* and Whiskered Yuhina *Yuhina flavicollis*.

OTHER KEY FAUNA

Despite its small size, the Park has almost all the mammals found in the forests of Mizoram, such as Bengal Slow Loris *Nycticebus bengalensis*, Tiger *Panthera tigris*, Leopard *P. pardus*, Leopard Cat *Prionailurus bengalensis*, Serow *Nemorhaedus sumatraensis* and Asiatic Black Bear *Ursus thibetanus*. On March 03, 1997, a Clouded Leopard *Neofelis nebulosa*, which is listed as Vulnerable by IUCN,

VULNERABLE

Blyth's Tragopan	<i>Tragopan blythii</i>
Dark-rumped Swift (Khasi Hills Swift)	<i>Apus acuticauda</i>

NEAR THREATENED

Cinereous Vulture	<i>Aegypius monachus</i>
Mrs Hume's Pheasant	<i>Symaticus humiae</i>
White-cheeked Hill-partridge	<i>Arborophila atrogularis</i>

ENDEMIC BIRD AREA 130: EASTERN HIMALAYAS

Blyth's Tragopan	<i>Tragopan blythii</i>
Dark-rumped swift or Khasi Hills Swift	<i>Apus acuticauda</i>
Striped Laughingthrush	<i>Garrulax virgatus</i>
Brown-capped Laughingthrush	<i>Garrulax austeni</i>
Grey Sibia	<i>Heterophasia gracilis</i>
White-naped Yuhina	<i>Yuhina bakeri</i>

BIOME-07: SINO-HIMALAYAN TEMPERATE FOREST

Orange-gorgeted Flycatcher	<i>Ficedula strophia</i>
Green Shrike-babbler	<i>Pteruthius xanthochlorus</i>
Orange-barred Leaf-warbler	<i>Phylloscopus pulcher</i>
Chestnut-crowned Warbler	<i>Seicercus castaneiceps</i>

BIOME-08: SINO-HIMALAYAN SUBTROPICAL FOREST

Striated Bulbul	<i>Pycnonotus striatus</i>
Flavescent Bulbul	<i>Pycnonotus flavescens</i>
Rusty-fronted Barwing	<i>Actinodura egeroni</i>
Blue-winged Minla	<i>Siva cyanouroptera</i>
White-spectacled Warbler	<i>Seicercus affinis</i>
Black-throated Sunbird	<i>Aethopyga saturata</i>
Streaked Spiderhunter	<i>Arachnothera magna</i>
Maroon Oriole	<i>Oriolus traillii</i>
Grey Treepie	<i>Dendrocitta formosae</i>

BIOME-09 INDOCHINESE TROPICAL MOIST FORESTS

Rufous-necked Laughingthrush	<i>Garrulax ruficollis</i>
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was sighted near the Phawngpui peak (2157 m) (Ghose 2002). Among the non-human primates, Stump-tailed Macaque *Macaca arctoides*, Hoolock Gibbon *Hylobates hoolock* and Capped Langur *Trachypithecus pileatus* are found. There is no substantial information on reptiles, amphibians, fish and invertebrates. During an IBCN survey, on February 18, 2014, a Bengal Slow Loris *Nycticebus bengalensis*, which is listed as Vulnerable by IUCN (2014), was seen asleep on a tree top (Raju Kasambe, *pers. obs.* 2014).

LAND USE

- Nature reserve
- Watershed
- *Jhum* cultivation

THREATS AND CONSERVATION ISSUES

- Poaching
- Tree felling
- *jhum* cultivation on the fringe



ANWARUDDIN CHOUDHURY

Grassland near Farpark on the top of Phawngpui (Blue Mountain) National Park

Blue Mountain NP is quite small and surrounded by human habitation. Its location on the international border gives it a special status. Poaching still continues, but on a reduced scale after declaration of the area as protected.

All around the Park, *jhum* cultivation (slash-and-burn shifting cultivation) is practiced. Villagers set fire to vegetation, and the fires sometimes spread to the Park. Firewood collection is another age-old practice still continuing in the Park, although it has been reduced

The cliffs located inside the Park need to be surveyed during summer months to confirm the existence and possible breeding of Khasi Hills Swift. It is also necessary to study the ecology and habitat requirements of this Vulnerable species, as Blue Mountain NP could be the second most important site in India, following Cherrapunji in Meghalaya, for this globally threatened species. The villagers are

dependent on the sanctuary for firewood and collect the firewood, thus exerting pressure on the resources. Hunting is rampant and people hunt everything in this area (Raju Kasambe, *pers. obs.* 2013).

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DAMPA TIGER RESERVE

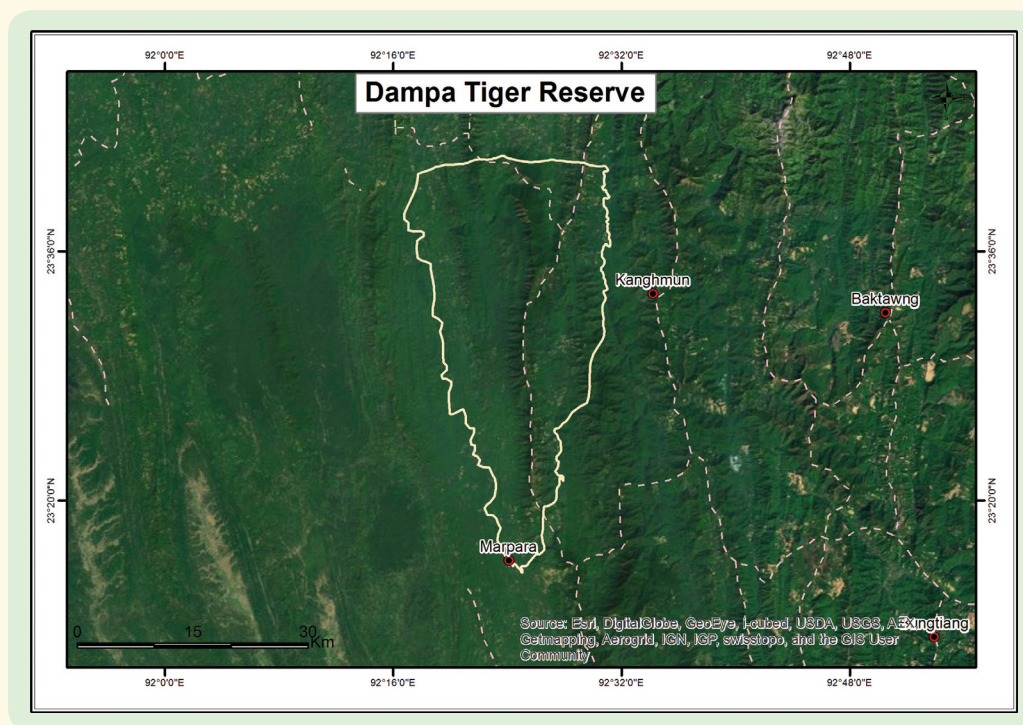
IN-MZ-02

IBA Site Code	: IN-MZ-02
Administrative Region (State)	: Mizoram
District	: Mamit
Coordinates	: 23° 34–39' N, 92° 22–26" E
Ownership	: State
Area	: 50,000 ha
Altitude	: 500–1,100 msl

Rainfall	: 2,000–2,500 mm
Temperature	: 3 °C to 35 °C
Biogeographic Zone	: Northeast
Habitats	: Moist Deciduous Forest, Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Tropical Grassland

IBA CRITERIA: A2 (Endemic Bird Area 130: Eastern Himalaya)

PROTECTION STATUS: Tiger Reserve, established in March, 1985.



GENERAL DESCRIPTION

Dampa Tiger Reserve is situated in Mizoram on the international border with Bangladesh. It is the largest protected area in Mizoram. It is administratively divided into two ranges: Teirei and Phuldungsei (Shankar Raman *et al.* 1998). The forest within the reserve is like an island surrounded by extensive bamboo tracts (Birand & Pawar 2001). The landscape is undulating, with hills traversing the area from north to south. Small, perennial rivulets flow all over the reserve. The noteworthy rivers of the site are Teirei, Keisalam, Seling, Saza, and Aivapui. The reserve consists of Moist Deciduous forests in the lower reaches and Evergreen and Semi-evergreen forests with natural grasslands at higher altitudes. There are large tracts of secondary forest in the landscape dominated by bamboo brakes and regenerating fallow *jhum* land (Shankar Raman 1995).

Dampa has one of the last remaining low to mid-elevation forests in western Mizoram. There is very little contiguity in the woody forest areas. It is a biodiversity hotspot with a variety of flora and fauna of Indo-Malayan origin. The hills at the eastern limit of this landscape are much higher, continuing further east to the Chin hills of Myanmar. The terrain is mountainous (highest peaks c. 1,300–1,500 msl), and is dissected by numerous drainages.

AVIFAUNA

Kaul *et al.* (1996) recorded 92 species of birds, but now the total number recorded from the area has risen to 237, of which 148 are forest species. More than 217 species of birds were documented during an IBA survey of the area (Birand & Pawar 2001).



A panoramic view of Dampa, the largest protected area in Mizoram

Dampa TR is the only area in the northeast where there has been an ecological study on bird communities (Shankar Raman *et al.* 1998). The forest bird community is represented by species such as the Great Pied Hornbill *Buceros bicornis*, Wreathed Hornbill *Aceros undulatus*, Grey Peacock-pheasant *Polyplectron bicalcaratum*, Red-headed Trogon *Harpactes erythrocephalus*, Mountain Imperial-pigeon *Ducula badia*, Long-tailed Broadbill *Psarisomus dalhousiae*, White-rumped Shama *Copsychus saularis*, Striped Tit Babbler *Macronous gularis*, White-bellied Yuhina *Yuhina zantholeuca*, Nepal Fulvetta *Alcippe nipalensis*, Black-naped Monarch *Hypothymis azurea*, and Velvet-fronted Nuthatch *Sitta frontalis* (Birand & Pawar 2001). Interestingly, the Oriental Pied Hornbill *Anthracoceros albirostris*, though seen mainly along riparian and secondary forest habitats in other areas, is apparently more forest restricted here.

Although the dominant cover in these hills is bamboo, very few of the bird species are specialists of this habitat. Only Yellow-bellied Warbler *Abroscopus superciliaris*, Rufous-capped Babbler *Stachyris ruficeps*, Puff-throated Babbler *Pellorneum ruficeps*, and Brown-cheeked Fulvetta *Alcippe poioicephala* were seen in bamboo (Birand & Pawar 2001).

A lone Japanese Sparrowhawk *Accipiter gularis* was spotted by Sumit Sen on February 21, 2005 near Teirei Forest

Rest House. The White-cheeked Hill Partridge *Arborophila atrogularis* also occurs in the reserve (Choudhury 2008).

Birand & Panwar (2001) found that in the 50,000 ha Dampa, there are proportionally higher number of forest bird species of higher altitude affinities, compared to other similar areas (e.g., Ngengpui WLS and Palak WLS – both IBAs). This is, perhaps, because the forest here has been preserved across a wider altitudinal range, which allows more species to survive in the landscape.

The Black-browed Leaf-warbler *Phylloscopus cantator*, a restricted-range species, is also found here (Kaul *et al.* 1996). This species is confined to the Eastern Himalaya Endemic Bird Area (EBA 130) (Stattersfield *et al.* 1998). The bird fauna of Dampa TR is a good representative of the birds of Biome 9 Indo-Chinese Tropical Moist Forest.

OTHER KEY FAUNA

Dampa's mammalian fauna is outstanding. As the name indicates, Dampa Tiger Reserve was established under Project Tiger to conserve *Panthera tigris* and its habitats. However, according to the census figures of the Forest Department, the Tiger population is very low. Only six were reported in 1996 (Jain 2001). The National Tiger Conservation Authority (NTCA) has categorized Dampa Tiger Reserve as one of the low density tiger reserves in India, with deficient data on the current population status of its tigers.

Choudhury (2001) had reported the presence of all the primates of north-east India from Dampa – Slow Loris *Nycticebus bengalensis*, Hoolock Gibbon *Hoolock hoolock*, Phayre's Leaf Monkey *Trachypithecus phayrei*, Capped

NEAR THREATENED

Great Pied Hornbill	<i>Buceros bicornis</i>
White-cheeked Hill-partridge	<i>Arborophila atrogularis</i>

ENDEMIC BIRD AREA 130: EASTERN HIMALAYA

Black-browed Leaf-warbler	<i>Phylloscopus cantator</i>
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Langur *Trachypithecus pileatus*, Assamese Macaque *Macaca assamensis*, Stump-tailed Macaque *M. arctoides*, Pig-tailed Macaque *M. nemestrina leonina*, and Rhesus Macaque *M. mulatta*. Dampa is one of the two IBAs where the highest diversity of primates in India has been recorded.

There is a specimen of Bamboo Bat or Flat-headed Bat *Tylonycteris pachypus* in the museum of Zoological Survey of India. Other mammals recorded include Leopard *P. pardus*, Clouded Leopard *Neofelis nebulosa* (frequently camera trapped), Dhole or Wild Dog *Cuon alpinus*, Binturong or Bear Cat *Arctictis binturong*, Hog Badger *Arctonyx collaris*, Crab-eating Mongoose *Herpestes urva*, Yellow-throated Marten *Martes flavigula*, Asiatic Black Bear *Ursus thibetanus*, Malayan Sun Bear *Helarctos malayanus* (frequently camera trapped), Marbled Cat *Pardofelis marmorata*, Asian Golden Cat *Catopuma temminckii*, Jungle Cat *Felis chaus*, Leopard Cat *Prionailurus bengalensis*, Sambar *Cervus unicolor*, Barking Deer *Muntiacus muntjac*, Gaur *Bos gaurus*, Red Serow *Capricornis rubidus*, Asiatic Elephant *Elephas maximus*, Sumatran Rhinoceros *Dicerorhinus sumatrensis* (extirpated), Himalayan Crestless Porcupine *Hystrix brachyura*, and Asiatic Brush-tailed Porcupine *Atherurus macrourus* (Choudhury 2013).

The site is extremely important for amphibians and reptiles. Twenty species of amphibians, mainly frogs, and 43 species of reptiles, including 16 species of lizards, are reported from this site (Pawar & Birand 2001). Some interesting species from the taxonomic, distribution, or conservation point of view are Red-eyed Shortleg *Leptobrachium smithi*, Plain Tree Toad *Pedostibes kempi*, Flat-backed Japalura *Japalura planidorsata*, and Keeled Box Turtle *Pyxidea mouhotii* (Pawar & Birand 2001). In forest streams of Dampa, three species of Stream Frog are found: Daniel's Oriental Stream Frog *Rana danieli*, Brown-backed Oriental Stream Frog *R. leptoglossa*, and Greater Green-backed Oriental Stream Frog *R. livida*.

Garra dampaensis, a new cyprinid fish, is described from Seling river, a tributary of the Khawthlang Tuipui (Karnaphuli river), inside Dampa TR (Lalrununga *et al.* 2013).

LAND USE

- Nature conservation and research

THREATS AND CONSERVATION ISSUES

- Poaching
- Tree felling and bamboo collection
- Forest fire
- *Jhum* cultivation
- Firewood and NTFP collection

All the villages surrounding the tiger reserve practice slash-and-burn shifting cultivation (Raman 1995), and there is always the threat of fire during the burning season. The sudden increase in insurgency threatens the security

of the reserve staff. Funds and staff to manage the reserve are inadequate. There is some pressure from peripheral villagers for non-timber forest produce (NTFP) and firewood (Jain 2001).

The inaccessible areas are well protected, and if protection remains strong, the extensive bamboo tracts will ultimately give way to woody forest (Raman *et al.* 1998).

The State Environment and Forest Department and Mizoram Remote Sensing Application Centre (MIRSAC) found that the green forest was reduced to 95.27 sq. km in 2005 from 152.47 sq. km in 1978, and was inversely proportional to human settlements in the area.

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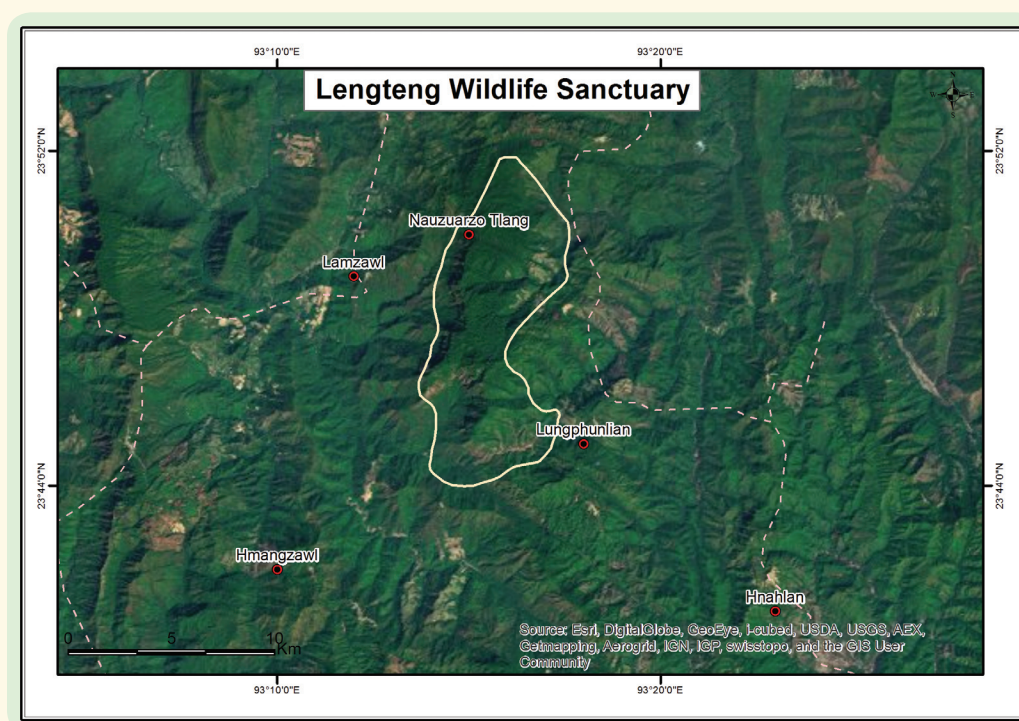
LENGTENG WILDLIFE SANCTUARY

IBA Site Code	: IN-MZ-03
Administrative Region (State)	: Mizoram
District	: Champhai
Coordinates	: 23° 49' 60" N, 93° 13' 00" E
Ownership	: State
Area	: 12,000 ha

Altitude	: 400–2,141 msl
Rainfall	: >2,000 mm
Temperature	: 2 °C to 35 °C
Biogeographic Zone	: Northeast
Habitats	: Tropical Dry Evergreen Forest, Tropical Semi-evergreen Forest, Subtropical Broadleaf Hill Forest

IBA CRITERIA: A1 (Threatened species), A2 (Endemic Bird Area 130: Eastern Himalaya)

PROTECTION STATUS: Wildlife Sanctuary, established in April, 1999.



GENERAL DESCRIPTION

Lengteng Wildlife Sanctuary lies in the eastern part of Mizoram, north of Murlen National Park (another IBA). The total area of the sanctuary is 8,000 ha, and the elevation ranges from 400 m to 2,141 m. The second highest peak in Mizoram is in this IBA. Intact Sub-tropical Evergreen and Sub-tropical Broadleaf Forests are found. This IBA is the habitat for many species of Indo-Malayan origin.

The sanctuary lies close to the Indo-Myanmar border and is significant because of its proximity to the Chin Hills. The nearest town is Ngapa.

AVIFAUNA

Information on the avifauna of Lengtung WLS is

inadequate. The sanctuary is close to Murlen National Park, so most of the common species found in Murlen are also found here.

This site falls in the Eastern Himalaya Endemic Bird Area (EBA 130), in which 21 restricted-range species have been identified. In the adjoining Murlen NP, two restricted-range species (Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*) were identified by Kaul *et al.* (2001). These are likely to occur in Lengtung also.

As the habitat in Lengtung WLS is relatively intact, large numbers of Biome 8 (Sino-Himalayan Subtropical) and Biome 9 (Indo-Chinese Tropical Moist Forest) bird species are likely to occur, as they are found in the adjoining Murlen NP.

Three species of pheasants are found in this IBA: Grey Peacock-pheasant *Polyplectron bicalcaratum*, Mrs. Hume's Pheasant *Syrmaticus humiae*, and Kaleej Pheasant *Lophura leucomelanos*. Only Mrs. Hume's Pheasant is now Near Threatened (BirdLife International 2014). Its status remains virtually unknown across its historic range in Myanmar, while hunting and habitat loss continue to be major threats throughout its range. According to Choudhury (2002), this bird is still widely distributed in Lengteng, above 850 m. In Mizoram, its habitat is largely secondary evergreen forest with grass. It occurs from Tropical Wet Evergreen Rain Forests to Subtropical Broadleaf Forests. Because of lower latitude in Mizoram, the tropical forest occurs up to 1500 m elevation. Between Lamzawl and Lengteng, Mrs. Hume's Pheasant haunts the edges of abandoned *jhum* (shifting) cultivation (Choudhury 2002). In addition to the previously known localities of Murlen and Phawngpui National Parks, hunters' specimens were recorded at Lengteng WLS, North Diltlang, Surtlang, Arhtlang, and Ngur, all in Champhai district, and it was reported by local people at 12 additional sites (Choudhury 2006).

The Mountain Bamboo-partridge *Bambusicola fytchii* is very common, sometimes seen near villages also (Choudhury 2002). Lengteng is one of the last remaining strongholds of the Great Pied Hornbill *Buceros bicornis* in Mizoram. Kasambe *et al.* (2014) found Great Pied Hornbill and Near Threatened Himalayan Griffon *Gyps himalayensis* during an IBCN bird survey in Lengteng WLS and Blue Mountain (Phawngpui) NP.

Three species of flowerpeckers, namely Fire-breasted Flowerpecker *Dicaeum ignipectus*, Plain Flowerpecker *D. minullum*, and Scarlet-backed Flowerpecker *D. cruentatum* were seen. Streaked Spiderhunter *Arachnothera magna* was seen almost everywhere in its preferred habitat of wild banana groves (Kasambe *et al.* 2014).

The following species of warblers could be identified from the photographs taken during the survey: Sulphur-bellied Warbler *Phylloscopus griseolus*, Orange-barred Leaf-warbler *P. pulcher*, Dusky Warbler *P. fuscatus*, Lemon-rumped Leaf-warbler *P. chloronotus*, Tickell's Leaf-warbler *P. affinis*, Broad-billed Warbler *Tickellia hodgsoni*, and White-spectacled Warbler *Seicercus affinis* (Kasambe *et al.* 2014).

Lengteng WLS is home to at least nine species of bulbuls, namely Red-vented *Pycnonotus cafer* (subspecies *bengalensis*), Red-whiskered *P. jocosus*, Flavescent *P. flavescent*, Black-headed *P. atriceps*, Black-crested *P. flaviventris*, Striated *P. striatus*, Crested Finchbill *Spizixos canifrons*, Asian Black Bulbul *Hypsipetes leucocephalus*, and Ashy Bulbul *Hemixos flavala* (Kasambe *et al.* 2014).

Three species of buntings were seen during the IBCN survey: Little Bunting *Emberiza pusilla*, Chestnut Bunting *Emberiza rutila*, and Yellow-breasted Bunting *Emberiza aureola* (Kasambe *et al.* 2014). The last has recently been

uplisted from Vulnerable to Endangered in the IUCN Red List (BirdLife International 2014).

Other notable species recorded during the survey were: Pin-striped Tit-babbler *Macronous gularis*, Black-eared Shrike-babbler *Pteruthius melanotis*, Green Shrike-babbler *Pteruthius xanthochlorus*, Golden Babbler *Stachyris chrysaea*. Six species of sunbirds, namely, Mrs Gould's Sunbird *Aethopyga gouldiae*, Green-tailed Sunbird *Aethopyga nipalensis*, Fire-tailed Sunbird *Aethopyga ignicauda*, Crimson Sunbird *Aethopyga*

ENDANGERED	
Yellow-breasted Bunting	<i>Emberiza aureola</i>
VULNERABLE	
Dark-rumped Swift (Khasi Hills Swift)	<i>Apus acuticauda</i>
NEAR THREATENED	
Mrs Hume's Pheasant	<i>Syrmaticus humiae</i>
Great Pied Hornbill	<i>Buceros bicornis</i>
Himalayan Griffon	<i>Gyps himalayensis</i>
ENDEMIC BIRD AREA 130: EASTERN HIMALAYA	
Dark-rumped Swift (Khasi Hills Swift)	<i>Apus acuticauda</i>
BIOME 7: SINO-HIMALAYAN TEMPERATE FOREST	
Common Hill-partridge	<i>Arborophila torqueola</i>
Nepal House Martin	<i>Delichon nipalensis</i>
Green Shrike-babbler	<i>Pteruthius xanthochlorus</i>
Orange-barred Leaf-warbler	<i>Phylloscopus pulcher</i>
Chestnut-crowned Warbler	<i>Seicercus castaneiceps</i>
Orange-gorgeted Flycatcher	<i>Ficedula strophliata</i>
White-tailed Nuthatch	<i>Sitta himalayensis</i>
BIOME 8: SINO-HIMALAYAN SUBTROPICAL FOREST	
Golden-throated Barbet	<i>Megalaima franklinii</i>
Blue-throated Barbet	<i>Megalaima asiatica</i>
Bay Woodpecker	<i>Blythipicus pyrrhotis</i>
Striated Bulbul	<i>Pycnonotus striatus</i>
Flavescent Bulbul	<i>Pycnonotus flavescent</i>
Slaty-backed Forktail	<i>Enicurus schistaceus</i>
Himalayan Cutia	<i>Cutia nipalensis</i>
Rusty-fronted Barwing	<i>Actinodura egertoni</i>
Blue-winged Minla	<i>Siva cyanouroptera</i>
Spot-breasted Parrotbill	<i>Paradoxornis guttaticollis</i>
White-spectacled Warbler	<i>Seicercus affinis</i>
Black-throated Sunbird	<i>Aethopyga saturata</i>
Streaked Spiderhunter	<i>Arachnothera magna</i>
Slender-billed Oriole	<i>Oriolus tenuirostris</i>
Maroon Oriole	<i>Oriolus traillii</i>
BIOME 9 INDOCHINESE TROPICAL MOIST FOREST	
Grey Peacock-pheasant	<i>Polyplectron bicalcaratum</i>
Black-backed Forktail	<i>Enicurus immaculatus</i>
Greater Necklaced Laughingthrush	<i>Garrulax pectoralis</i>
Rufous-necked Laughingthrush	<i>Garrulax ruficollis</i>

siparaja, Black-throated Sunbird *Aethopyga saturata*, and Ruby-cheeked Sunbird *Chalcoparia singalensis* were seen during the survey. A rarely photographed subspecies of Streak-breasted Scimitar-babbler *Pomatorhinus ruficollis bakeri* was seen, besides Spot-breasted Scimitar-babbler *Megapomatorhinus maclellandi* and Phayre's Scimitar-babbler *Pomatorhinus phayrei* (Kasambe *et al.* 2014).

OTHER KEY FAUNA

Almost all the mammal species found in the forests of Mizoram are seen in Lengteng, such as Slow Loris *Nycticebus coucang*, Tiger *Panthera tigris*, Leopard *P. pardus*, Leopard

Cat *Prionailurus bengalensis*, Serow *Naemorhedus sumatraensis*, and Asiatic Black Bear *Ursus thibetanus*. Among the non-human primates, Stump-tailed Macaque *Macaca arctoides*, Hoolock Gibbon *Hylobates hoolock*, and Capped Langur *Trachypithecus pileatus* are found. Reptilian Asian Brown Tortoise *Manouria emys* is becoming rare due to over-harvesting (Choudhury 2004).

In 2008, Lalremsanga *et al.* (2010) found *Calotes maria* Gray, family Agamidae, an additional lizard record from Lengteng WLS. This record extends the range by c. 240 km, southeast from the Khasi Hills in Meghalaya, with the possibility of occurrence in the contiguous hill ranges. Lalremsanga *et al.* (2010) recorded two more lizards *Calotes mystaceus* and *Ophisaurus gracilis*, which were not recorded previously from Mizoram. Till then, 30 species of lizards were reported in Mizoram.

LAND USE

- Nature reserve
- Cultivation

THREATS AND CONSERVATION ISSUES

- Poaching
- Tree felling
- *Jhum* on fringes

The major problem of this sanctuary is that the staff strength is very low, resulting in tree cutting and poaching on the fringes. *Jhum* cultivation is practiced all around



Lengteng is the second highest peak in Mizoram after the Blue Mountains. The jhum in the foreground is a major conservation issue in the IBAs of Mizoram

the sanctuary. Villagers burn the forests to clear land for cultivation. Sometimes, these fires spread to the sanctuary. Poaching of large mammals and birds is a persistent problem.

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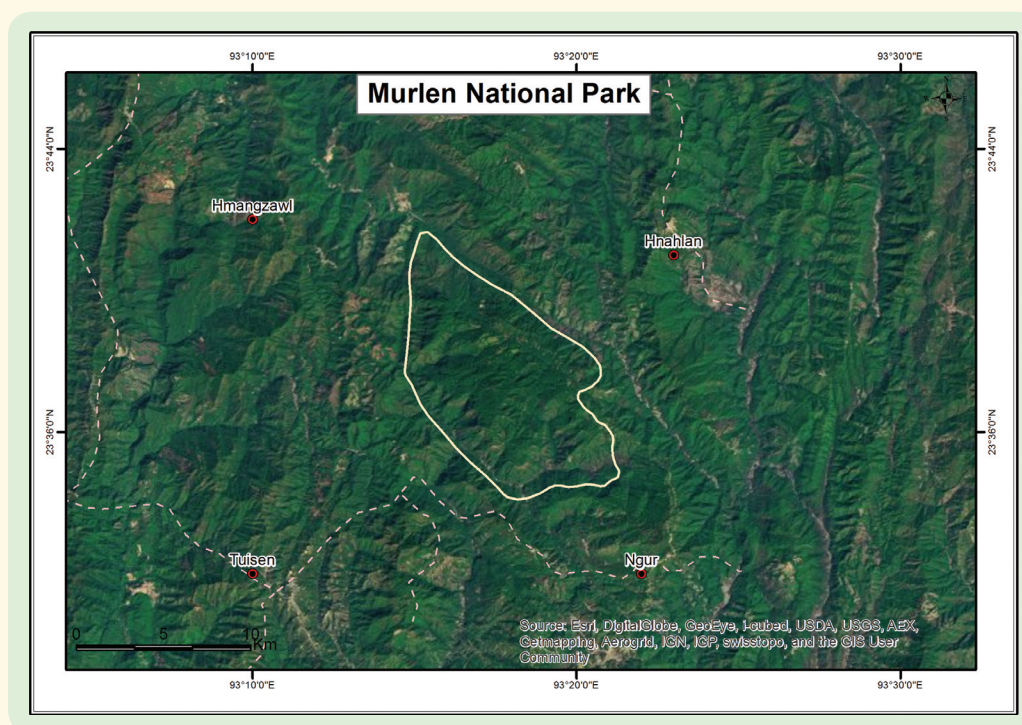
MURLEN NATIONAL PARK

IN-MZ-04

IBA Site Code	: IN-MZ-04	Altitude	: 400–1,700 msl
Administrative Region (State)	: Mizoram	Rainfall	: >2,000 mm
District	: Champhai	Temperature	: 5 °C to 35 °C
Coordinates	: 23° 41' 20" N, 93° 19' 53" E	Biogeographic Zone	: Northeast
Ownership	: State	Habitats	: Tropical Dry Evergreen Forest, Tropical Semi-evergreen Forest, Subtropical Broadleaf Forest
Area	: 20,000 ha		

IBA CRITERIA: A1 (Threatened species), A2 (Endemic Bird Area 130: Eastern Himalaya)

PROTECTION STATUS: National Park, established in July, 1991.



GENERAL DESCRIPTION

Murlen National Park is situated c. 220 km east of Aizawl, the capital of Mizoram. This national park lies close to the Indo-Myanmar border and is significant for its proximity to the Chin Hills. Large tracts of relatively undisturbed Subtropical Broadleaf and Tropical Evergreen and Semi-evergreen forests are to be found in the park. Some areas of primary and secondary forest growth also lie outside the park boundary. A jeepable track links the park (Kaul *et al.* 2001) to Champhai, the nearest town. There are two main villages, Vapar and Murlen, close to the park border.

AVIFAUNA

More than 150 species of birds have been identified by Kaul *et al.* (2001) from this site. Murlen NP is located in a region which is part of the Eastern Himalaya Endemic Bird

Area (EBA 130). In this EBA, 21 restricted-range or endemic species have been identified by BirdLife International (undated). Grey Sibia *Heterophasia gracilis* and White-naped Yuhina *Yuhina bakeri*, two restricted-range species, have been seen (Kaul *et al.* 2001), but more are likely to occur. Therefore, this IBA qualifies for A2 criteria.

However, the most important species for which this site has been selected is Mrs. Hume's Pheasant *Syrmaticus humiae*. According to Choudhury (2002), Champhai and Saiha are the main districts in Mizoram where this species occurs. Champhai district alone accounts for c. 61% (c. 800 sq. km) of the total potential habitat. Choudhury (2002) recorded this species from 12 new sites in Mizoram. This pheasant has been downlisted from Vulnerable to Near Threatened by BirdLife International in 2008 (Rahmani, 2012).

Kaleej Pheasant *Lophura leucomelanos* and Grey Peacock-pheasant *Polyplectron bicalcaratum* are the two common pheasants in this IBA. Kaul *et al.* (1996) encountered them frequently all over the park. Hill Partridge *Arborophila torqueola* and Rufous-throated Partridge *A. rufogularis* are also common. Mountain Bamboo-partridge *Bambusicola fytchii* (Choudhury 2002) is very common, sometimes seen near villages too. A globally Threatened species that is likely to occur in this IBA is the Dark-rumped or Khasi Hill Swift *Apus acuticauda*. Although none were seen during a recent survey, Ahmed *et al.* (2001) had found good potential habitats for this species. They found a number of *Apus pacificus* and *A. apus*, but no *A. acuticauda*. A cliff located inside the evergreen patch of forest, however, needs to be surveyed during April-May, as it seems to be a potential habitat for Dark-rumped Swift (Ahmed *et al.* 2001). The name Murlen means “place of swifts” in the Mizo language. BirdLife International (undated) has listed 95 bird species in Biome 8 (Sino-Himalayan Subtropical Forest). According to Kaul *et al.* (2001), 34 species of Biome 8 are found in Murlen. However, a detailed study may reveal more species of Biome 8, and other biomes. For example, in Biome 9 (Indo-Chinese Tropical Moist Forest), BirdLife International (undated) has listed 19 species, of which four have been identified from Murlen IBA.

OTHER KEY FAUNA

The major mammals of Murlen NP are Clouded Leopard *Neofelis nebulosa*, Barking Deer *Muntiacus muntjak*, Sambar *Rusa unicolor*, Wild Boar *Sus scrofa*, Black or Malayan Giant Squirrel *Ratufa bicolor*, Hoary-bellied Squirrel *Callosciurus pygerythrus*, Pallas’s Squirrel *C. erythraeus*, Capped Langur *Trachypithecus pileatus*, Assamese Macaque *Macaca assamensis*, Stump-tailed Macaque *M. arctoides*, Hoolock Gibbon *Hylobates hoolock*, and Yellow-throated Marten *Martes flavigula*.

KEY FLORA

During recent surveys, some of the plants of conservation value observed in the park area were *Phanera glauca* subsp. *tenuiflora* var. *murlenensis*, which is named after Murlen NP, *Thalictrum rotundifolium*, *Fissistigma verrucosum*, *Magnolia punduana*, *Gynocardia odorata*, *Kydia glabrescens*, *Acer laevigatum*, *Indigofera lacei*, *Campanula khasiana*, *Rhododendron formosum*, *Nervilia punctata*, *Ornithochilus yingjiangensis*, *Bulbophyllum picturatum*, *Bulbophyllum helenae*, *Eria lacei*, *Uncifera obtusifolia*, *Vanda pumila*,

Aristolochia tagala, and *Balanophora fungosa* subsp. *indica*. Apart from these, the Botanical Survey of India, Eastern Research Centre, Shillong survey team has identified more than 500 plant species in the area and more than 700 plant species are expected to be found in the Park (Sachin Sharma, pers. comm. 2014).

LAND USE

- Nature conservation
- *Jhum* cultivation

THREATS AND CONSERVATION ISSUES

- Poaching
- Illegal tree cutting

This IBA suffers from the common problems of all IBA sites in the northeast, i.e. poaching and timber cutting. The villagers exert tremendous pressure on the park. However, there is an opportunity to change their attitude by awareness programmes and by showing them the ecological benefits of conserving the park. Environmental education is urgently required, along with long-term studies on the general biodiversity inventory, along with specific projects (e.g. on Mrs. Hume’s Pheasant and Dark-rumped Swift). Owing to its location close to the Indo-Myanmar border, trade in Asiatic Black Bear parts, including flesh, is prevalent and the products go to Myanmar. Murlen NP, which contains some of the higher known hills of Mizoram, constitutes an important region that has not been given adequate attention by the Government. In terms of conservation of Mrs. Hume’s Pheasant and possibly Blyth’s Tragopan, this site is of high conservation value and needs better protection (Kaul *et al.* 1996).

KEY CONTRIBUTORS

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NEAR THREATENED

White-cheeked Hill-partridge	<i>Arborophila atrogularis</i>
Mrs. Hume’s Pheasant	<i>Syrmaticus humiae</i>
Great Pied Hornbill	<i>Buceros bicornis</i>

ENDEMIC BIRD AREA 130: EASTERN HIMALAYA

Grey Sibia	<i>Heterophasia gracilis</i>
White-naped Yuhina	<i>Yuhina bakeri</i>

NGENGPUI WILDLIFE SANCTUARY

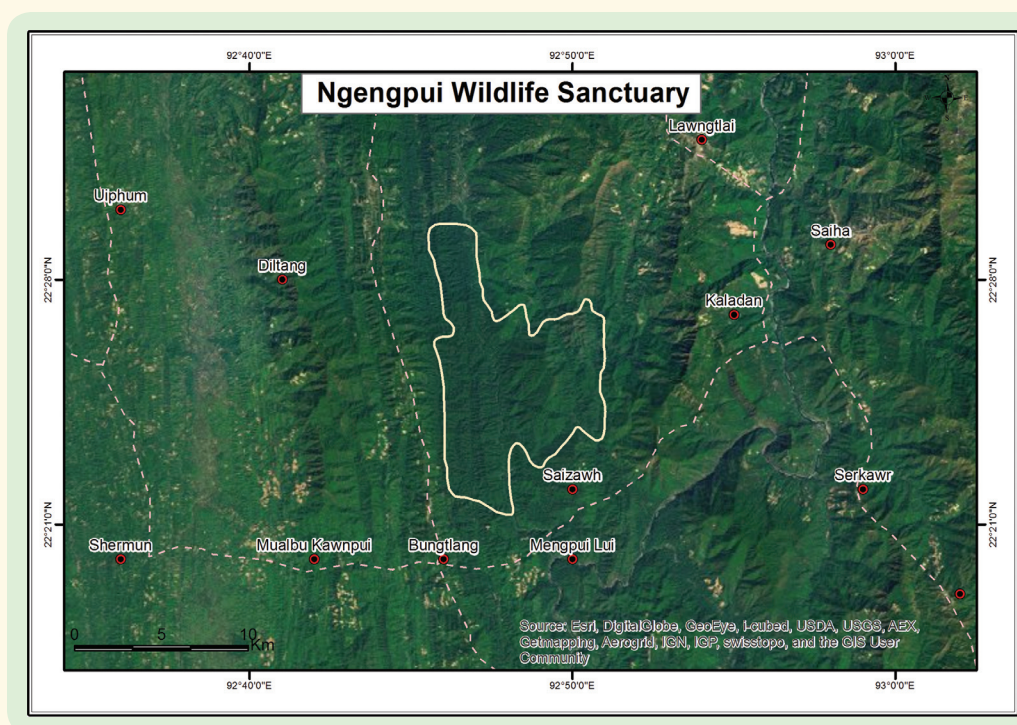
IN-MZ-05

IBA Site Code	: IN-MZ-05
Administrative Region (State)	: Mizoram
District	: Lawngtlai
Coordinates	: 22° 20-27' N, 92° 46-49' E
Ownership	: State
Area	: 11,000 ha

Altitude	: 170–550 msl
Rainfall	: >2,000 mm
Temperature	: 7 °C to 32 °C
Biogeographic Zone	: Northeast
Habitats	: Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest

IBA CRITERIA: A3 (Biome 9: Indo-Chinese Tropical Moist Forest); Data Deficient

PROTECTION STATUS: Wildlife Sanctuary and Reserve Forest, established in July 22, 1997.



GENERAL DESCRIPTION

Ngengpui Wildlife Sanctuary is situated in the middle and lower catchment areas of the Ngengpui river, which flows through the sanctuary, joining the Kolodnye river further south. The area is situated in the 'ridge and valley' province of southwestern Mizoram. The largest river in this area is the Kolodnye (also known as Chhimtuipui).

The terrain is low undulating hills, with a series of parallel north-south ridges, well drained by numerous streams with rocky as well as silted streambeds. The climate is tropical. Some of the finest surviving patches of tropical rainforests in Mizoram are found in this IBA. The sanctuary has some patches of mature Thingsen or Gurjan *Dipterocarpus turbinatus*; many of these majestic dipterocarp trees are more than 50 m high (Choudhury 2008). Major secondary landscape elements are fallow *jhum* fields, bamboo brakes,

plantations, and village gardens (Birand & Pawar 2001). Teak plantations are also present in the valley flatlands or on moderate slopes.

Rainfall is fairly high, with distinct and predictable periods without rain. However, due to the relatively low-lying location of the site and high moisture retention capacity of the soil, conditions remain humid even in the rainless periods between November-December and April (Panwar 1999).

AVIFAUNA

The sanctuary lies within a biodiversity hotspot, with a variety of flora and fauna of Indo-Malayan origin. Over 85 species of birds were recorded from the region during a short IBA survey (Birand & Pawar 2001), though the birdlife is certainly much richer. Consequently, it is listed here as a Data Deficient site.



ANWARUDDIN CHOUDHURY

The Nagaland river drains the sanctuary named after it. Some of the finest mature rain forests of the region are seen in this IBA

Some notable bird species recorded in this IBA are the White-cheeked Partridge *Arborophila atrogularis*, Kaleej Pheasant *Lophura leucomelanos*, Speckled Piculet *Picumnus innominatus*, Green-billed Malkoha *Phaenicophaeus tristis*, Malayan Night-heron *Gorsachius melanolophus*, Spot-breasted Scimitar-babbler *Pomatorhinus erythrogenys*, Oriental Dwarf Kingfisher *Ceyx erithaca*, White-crested Laughingthrush *Garrulax leucolophus*, Great-eared Nightjar *Lyncornis macrotis*, Nepal Babbler *Pnoepyga immaculata*, Red-headed Trogon *Harpactes erythrocephalus*, Black-backed Forktail *Enicurus immaculatus*, Vernal Hanging Parrot *Loriculus vernalis*, and Great Slaty Woodpecker *Mulleripicus pulverulentus*. Raptors such as Black Eagle *Ictinaetus malayensis* and Rufous-bellied Eagle *Lophotriorchis kienerii* are sighted here. (Birand & Pawar 2001). The Grey-headed Lapwing *Vanellus cinereus* and Blue-naped Pitta *Pitta nipalensis* were recorded (Robertson 1996). Three species of hornbills occur in Ngengpui, the Wreathed *Aceros undulatus*, Great Pied *Buceros bicornis*, and the Oriental Pied Hornbill *Anthracoceros albirostris*. The last named species appeared

to be particularly common, especially around forest edges and in disturbed and secondary forest. Some other species recorded include Grey Peacock-pheasant *Polyplectron bicalcaratum*, Black Baza *Aviceda leuphotes*, and Oriental Honey Buzzard *Pernis ptilorhynchus* (Choudhury 2008).

This IBA has a high proportion of typical low elevation evergreen and semi-evergreen forest birds. As a dipterocarp dominated area, it would be interesting to compare its bird fauna with similar areas in nearby Myanmar and other dipterocarp forests as far north as Namdapha (an IBA).



ANWARUDDIN CHOUDHURY

Ngengpui Wildlife Sanctuary has rain forest that harbours a large number of birds

VULNERABLE

Great Slaty Woodpecker *Mulleripicus pulverulentus*

NEAR THREATENED

Great Pied Hornbill *Buceros bicornis*

However, this area seemed to be poor in avifauna compared to other low altitudinal areas (Birand & Pawar 2001). Much of this disparity may be due to the apparent paucity of high altitude species. However, further investigation is needed across a wider area, and areas with habitat contiguity. The site appeared deficient in small insectivores, and the most common species in the forests were the Striped Tit-babbler *Macronous gularis*, Nepal Fulvetta *Alcippe nipalensis*, and White-bellied Yuhina *Yuhina zantholeuca*.

Ngengpui is located in what is considered an Eastern Himalaya Endemic Bird Area. In this EBA, 21 restricted-range or endemic species have been identified. As we do not have sufficient data, we do not know how many restricted-range species are found here.

OTHER KEY FAUNA

Ngengpui WLS is extremely rich in mammal, reptile, and amphibian fauna. Diversity of felines is noteworthy. It harbours three big and several smaller cats, including the Tiger *Panthera tigris* (now stray), Leopard *P. pardus*, Clouded Leopard *Neofelis nebulosa*, Jungle Cat *Felis chaus*, Leopard Cat *Prionailurus bengalensis*, and Fishing Cat *P. viverrinus*. With eight species of non-human primates, this IBA alongwith Dampa tops the list of sites with highest number of simians. The species are Slow Loris *Nycticebus bengalensis*, Assamese Macaque *Macaca assamensis*, Stump-tailed Macaque *M. arctoides*, Rhesus Macaque *M. mulatta*, Pig-tailed Macaque *M. nemestrina leonina*, Capped Langur *Trachypitecus pileatus*, Phayre's Leaf Monkey *T. phayrei*, and Hoolock Gibbon *Hoolock hoolock*. Among other mammals there are the Dhole or Wild Dog *Cuon alpinus*, Golden Jackal *Canis aureus*, Hog Badger *Arctonyx collaris*, Oriental Small-clawed Otter *Aonyx cinerea*, Asiatic Black Bear *Ursus thibetanus*, Malayan Sun Bear *Helarctos malayanus*, Asiatic Elephant *Elephas maximus*, Sambar *Rucervus unicolor*, Barking Deer *Muntiacus muntjac*, Red Serow *Capricornis rubidus*, Himalayan Crestless Porcupine *Hystrix brachyura*, and Asiatic Brush-tailed Porcupine *Atherurus macrourus* (Choudhury 2013). Mizoram's second major population (although small) of the Gaur *Bos gaurus* occurs in this IBA (Choudhury 2002).

Amphibian species such as Common Asian Toad *Bufo melanostictus*, White Moustached Tree Frog *Polypedates leucomystax*, and Large Green Tree Frog *Rhacophorus maximus* are found in this IBA. Asian Giant Tortoise *Manouria emys*, Asian Leaf Turtle *Cyclemys oldhami*, Spiny-tailed House Gecko *Hemidactylus frenatus*, Tockay *Gekko gecko*, Asian Gliding Lizard *Draco maculatus*, Streamside Forest Skink *Sphenomorphus maculatus*, Burmese Python

Python molurus bivittatus, Golden Tree Snake *Chrysopelea ornata*, Red-necked Keelback *Rhabdophis subminiatus*, and Banded Krait *Bungarus fasciatus* are also found here (Panwar 1999).

LAND USE

- Nature conservation and research
- Water management
- Agriculture

THREATS AND CONSERVATION ISSUES

- Agricultural intensification and expansion
- Forest fires
- Habitat deterioration
- Unsustainable exploitation of forest resources

The protected status of the sanctuary has saved it to some extent, but the forests around it continue to deteriorate and the sanctuary is increasingly becoming a fragmented patch of primary forest. There are several villages close by, putting the fringes of the sanctuary under anthropogenic pressure. There has been a long-standing scheme to relocate Khawmawi village which lies on the sanctuary border, but various impediments have prevented its execution (Birand & Pawar 2001). This is one of the southernmost protected areas in northeast India (the southernmost is Tokalo Wildlife Sanctuary), and is relatively remote, hence monitoring is not easy.

KEY CONTRIBUTORS

Ayeshgul Birand, Samrat Pawar, Anwaruddin Chodhury.

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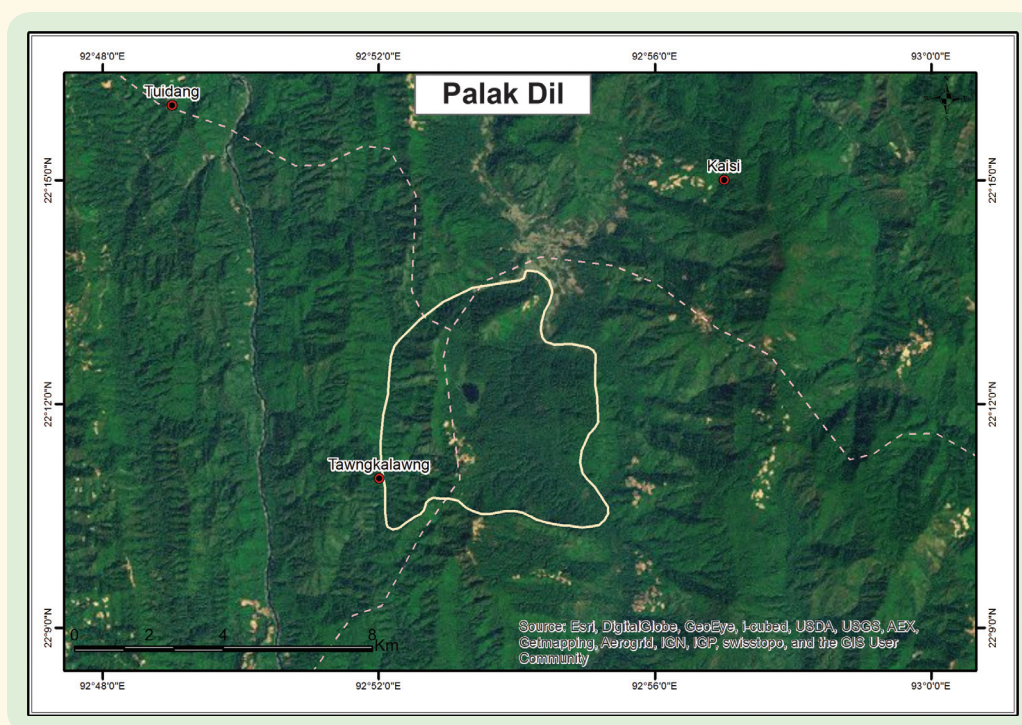
PALAK LAKE

IN-MZ-06

IBA Site Code	: IN-MZ-06	Rainfall	: >2,000 mm
Administrative Region (State)	: Mizoram	Temperature	: 7 °C to 30 °C
District	: Saiha	Biogeographic Zone	: Northeast
Coordinates	: 22° 13' N, 92° 54' E	Habitats	: Tropical Moist Deciduous Forest, Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Tropical Grassland, Freshwater Swamp
Ownership	: State, Community		
Area	: 2,000 ha (includ. RF)		
Altitude	: c. 650 msl		

IBA CRITERIA: A3 (Biome 9: Indo-Chinese Tropical Moist Forest)

PROTECTION STATUS: Not officially protected.



GENERAL DESCRIPTION

Mizoram state has three types of lakes: valley lakes, tectonic/landslide lakes, and artificial reservoirs, but the only one of significance is Palak Dil, a natural lake in a depression in the hills. Palak Dil may possibly be a combination of valley and tectonic lakes. Locally in Mizoram, lakes are called *dils*. There are many such *dils* scattered all over the state, but they are tiny pools or marshy depressions such as Reng Dil, Tam Dil, and Mampui Dil (Choudhury 2002).

Palak Dil, the largest lake in Mizoram, is situated c. 20 km southeast of Ngengpui Wildlife Sanctuary (an IBA). The forest around the lake is Tropical Wet Evergreen. Many of the nearby hills are covered with *jhum* (slash-and-burn cultivation) and bamboo brakes. The eastern shore and at least the first hill chain behind it are forested. The lake is

surrounded by moderately steep hills that have dipterocarp dominated Tropical Evergreen Forest. The forests are rich in palms, rattan, dense cane brakes, and reeds along the lake margin (Birand & Pawar 2001). Except for stray records of White-winged Duck *Cairina scutulata*, there is no globally Threatened species.

AVIFAUNA

More than 70 species of birds were recorded from the region during an IBA survey (Birand & Pawar 2001, 2004, though the birdlife is certainly much richer. Species recorded include the Chestnut-winged Cuckoo *Clamator coromandus*, White-rumped Shama *Copsychus malabaricus*, Red-headed Trogon *Harpactes erythrocephalus*, Long-tailed Broadbill *Psarisomus dalhousiae*, Silver-breasted Broadbill

Serilophus lunatus, Greater Necklaced Laughingthrush *Garrulax pectoralis*, Lesser Necklaced Laughingthrush *G. monileger*, Maroon Oriole *Oriolus traillii*, White-bellied Yuhina *Erpornis zantholeuca*, and Streaked Spiderhunter *Arachnothera magna*.

Palak Dil and its forests occur in Biome 9 (Indo-Chinese Tropical Moist Forest). Four of the 19 species listed for this biome in India, Grey Peacock-pheasant *Polyplectron bicalcaratum*, Pale-chinned Flycatcher *Cyornis poliogenys*, Black-backed Forktail *Enicurus immaculatus*, and Lesser Necklaced Laughingthrush *Garrulax monileger*, have been seen by Birand & Pawar (2004), but more are likely to occur. Some birds of Biome 8 (Sino-Himalayan Subtropical Forest) are also seen here in winter, such as the Bay Woodpecker *Blythipicus pyrrhotis*, Orange-bellied Leafbird *Chloropsis hardwickii*, White-throated Bulbul *Alophoixus flaveolus*, and Nepal Fulvetta *Alcippe nipalensis*.

The Kaleej Pheasant *Lophura leucomelanos* and Grey Peacock-pheasant *Polyplectron bicalcaratum* are among the noteworthy galliforms. The Near Threatened Great Pied Hornbill *Buceros bicornis* was once not uncommon in the area but it is probably extirpated locally. The current status of the Endangered White-winged Duck *Asarcornis scutulata* is not known, but is likely to occur (Choudhury 2008).

OTHER KEY FAUNA

The mammals of Palak Lake include the Oriental Small-clawed Otter *Amblonyx cinereus* and Hairyfooted Flying Squirrel *Belomys pearsoni* (Birand & Pawar 2001). Other species are Hoolock Gibbon *Hoolock hoolock*, Dhole *Cuon alpinus*, Asian Black Bear *Ursus thibetanus*, Fishing Cat *Prionailurus viverrina*, Tiger *Panthera tigris*, Leopard *P. pardus*, Asiatic Elephant *Elephas maximus*, and Gaur *Bos gaurus*.

ENDANGERED

White-winged Duck (?)	<i>Asarcornis scutulata</i>
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NEAR THREATENED

Oriental Darter	<i>Anhinga melanogaster</i>
Great Pied Hornbill (?)	<i>Buceros bicornis</i>

LAND USE

- Fishing
- Water management
- Forestry
- Cultivation

THREATS AND CONSERVATION ISSUES

- Habitat deterioration
- Exploitation of forest resources
- *Jhum* cultivation
- Invasive species

Though significant forest cover remains outside the lake area, the forests around it continue to deteriorate. The reserve forest around Palak Dil is very small (c. 10.5 sq. km), and the inter-village trail surrounding it makes it vulnerable to disturbance. Apart from habitat degradation by *jhum* cultivation, cane extraction, occasional tree felling, and hunting for larger vertebrates and birds are constant threats to this IBA. There are three main villages in the vicinity of the lake. Of these, Phura with 150 houses is the largest village (Birand & Pawar 2001).

There is a plan to declare Palak Lake as a sanctuary, but government approval is pending. Meanwhile, there is a plan to make it a tourist attraction by converting it into a boating resort. This would involve clearing some forest to make rest houses and hotels, a definite anthropogenic threat. An area of 15 sq. km was declared as a sanctuary, but owing to protest from local communities it was denotified. However, there is some sort of community protection.

The lake also faces danger from invasive species such as the African Cichlid fish *Tilapia*, introduced in the 1980s. The lake yields a steady supply of the introduced fish now, and most of the local fish fauna has apparently disappeared.

KEY CONTRIBUTORS

Ayeshgul Birand, Samrat Pawar, Anwaruddin Choudhury.

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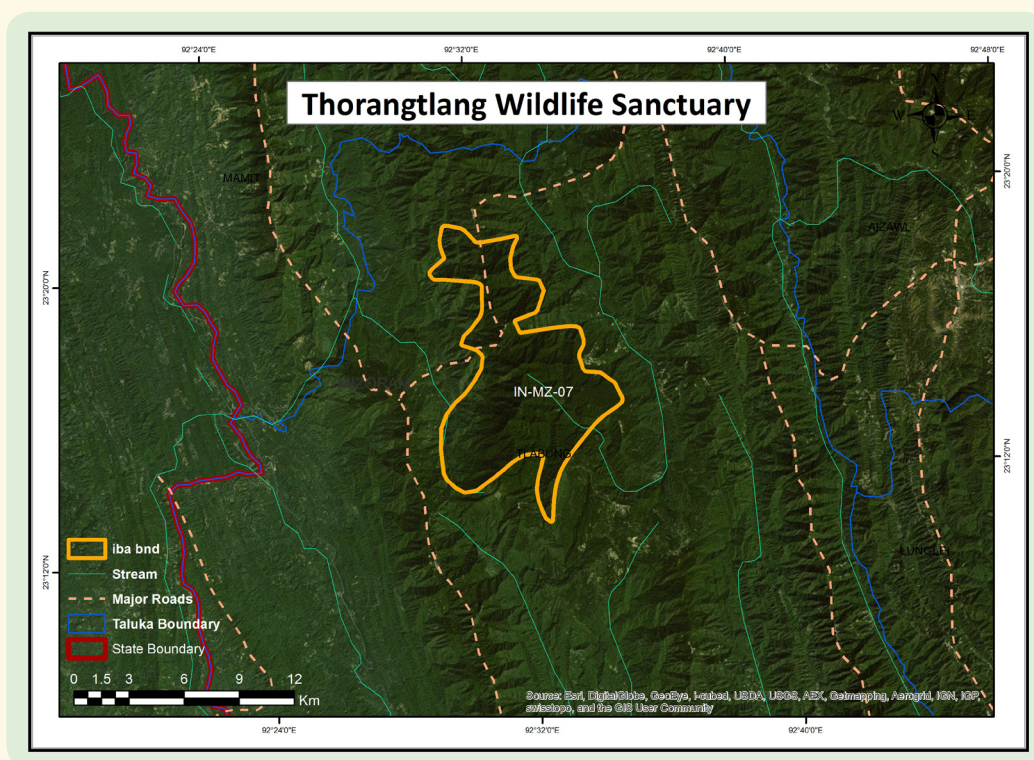
THORANGLANG WILDLIFE SANCTUARY

IN-MZ-07

IBA Site Code	: IN-MZ-07	Altitude	: 200–800 msl (highest point 1,380 m)
Administrative Region (State)	: Mizoram	Rainfall	: 2,000–3,000 mm
District	: Lunglei	Temperature	: 3 °C to 35 °C
Coordinates	: 23° 15' N, 92° 33' E	Biogeographic Zone	: Northeast
Ownership	: State	Habitats	: Tropical Wet Evergreen Forest, Tropical Semi-evergreen Forest, Moist Deciduous Forest
Area	: 19,800 ha		

IBA CRITERIA: A2 (Endemic Bird Area 130: Eastern Himalaya)

PROTECTION STATUS: Wildlife Sanctuary, established in 2002, enlarged 2013.



GENERAL DESCRIPTION

Thoranglang Wildlife Sanctuary is in Lunglei district and is situated south-east of Dampa Tiger Reserve, not far from the international border with Bangladesh. The landscape is undulating, with hills ranging north to south. Small, perennial rivulets flow all over the sanctuary, which consists of Moist Deciduous forests in the lower reaches, and Evergreen and Semi-evergreen Forests, with some small grasslands at higher areas. Tropical Semi-evergreen is the dominant forest type. There are patches of secondary growth in the landscape dominated by bamboo brakes. The original area of the sanctuary was only 50 sq. km, but recently it has been increased four-fold to a sizeable 198 sq. km (Choudhury 2008).

AVIFAUNA

From the avifaunal point of view, this site is Data Deficient. In view of its location, habitat type, and terrain, the birdlife is likely to be similar to that of the nearby Dampa Tiger Reserve. From the preserved bird parts and interviews with nearby villagers and old hunters, and visits to adjacent forests, the site must have the Great Pied Hornbill *Buceros bicornis*, Wreathed Hornbill *Aceros undulatus*, Oriental Pied Hornbill *Anthracoceros albirostris*, White-cheeked Hill-partridge *Arborophila atrogularis*, Grey Peacock-pheasant *Polyplectron bicalcaratum*, Kaleej Pheasant *Lophura leucomelanos*, Red Junglefowl *Gallus gallus*, Red-headed Trogon *Harpactes erythrocephalus*, Mountain Imperial-pigeon *Ducula badia*, Long-tailed Broadbill *Psarisomus dalhousiae*, White-rumped Shama



SANDEEP DHUMAL

There are reports of Rufous-necked Hornbill *Aceros nipalensis* from this site

Copsychus saularis, Striped Tit-babbler *Macronous gularis*, Nepal Fulvetta *Alcippe nipalensis*, Black-naped Monarch *Hypothymis azurea*, and Oriental Honey Buzzard *Pernis ptilorhynchus* (Anwaruddin Choudhury, *pers. comm.* 2014). There are reports of Rufous-necked Hornbill *Aceros nipalensis*, a Vulnerable species (Laltlanhlua Zathang, *pers. comm.* 2013).

Thorangtlang WLS has good representation of the bird fauna of Biome 9 (Indo-Chinese Tropical Moist Forest).

NEAR THREATENED

Rufous-necked Hornbill (?) *Aceros nipalensis*

NEAR THREATENED

Great Pied Hornbill *Buceros bicornis*
White-cheeked Hill-partridge *Arborophila atrogularis*

OTHER KEY FAUNA

As in Dampa, the mammalian fauna of Thorangtlang is likely to be outstanding, but many species are yet to be confirmed due to lack of survey. The Tiger *Panthera tigris* was present in small numbers even in the late 1990s, but the current status is not known. Clouded Leopard *Neofelis nebulosa* and Leopard *Panthera pardus* still occur. The sanctuary harbours Phayre's Leaf Monkey *Trachypithecus phayrei*, Capped Langur *T. pileatus*, Hoolock Gibbon *Hoolock hoolock*, Slow Loris *Nycticebus bengalensis*, and several species of macaques. The sanctuary had a seasonal population of wild Asiatic Elephant *Elephas maximus* possibly coming from Bangladesh, but these have almost stopped coming. Dhole or Wild Dog *Cuon alpinus*, Yellow-throated Marten *Martes flavigula*, Sambar *Rucervus*

unicolor, Barking Deer *Muntiacus muntjak*, Red Serow *Capricornis rubidus*, Malayan Giant Squirrel *Ratufa bicolor*, and Crestless Himalayan Porcupine *Hystrix brachyura* (Choudhury 2013).

The amphibian and reptilian fauna are poorly known, and a survey is overdue.

LAND USE

- Nature conservation
- *Jhum* cultivation

THREATS AND CONSERVATION ISSUES

- Poaching
- Tree felling and bamboo collection
- Forest fire
- *Jhum* cultivation
- Firewood and NTFP collection

All the villages surrounding the sanctuary practice *jhum* or slash-and-burn shifting cultivation. The interior areas are relatively better protected.

KEY CONTRIBUTOR

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